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Proactive environmental strategy and firm performance at the bottom of the pyramid

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Abstract

This paper utilizes insights from the natural resource-based view to examine the conditions under which proactive environmental strategy (PES) drive firm performance. Using data collected from 266 small- and medium-sized enterprises operating in Ghana, the results suggest that the impact of PES on firm performance is more pronounced in firms that do not purse bottom of the pyramid orientation but not significant for firms pursuing the bottom of the pyramid orientation. Besides, the findings show that the influence of PES on firm performance is amplified for firms adopting imitation orientation but not significant for nonimitation-oriented firms. Implications and directions for future research are discussed.

KEYWORDS

bottom of the pyramid, developing economy, Ghana, imitation orientation, performance, proactive environmental strategy, SMEs

1 | INTRODUCTION

The environmental sustainability literature highlights global environmental problems that require urgent solutions. Consequently, the impact of business operations and practices on the natural environment has received increased societal awareness (Aragón-Correa, Hurtado-Torres, Sharma, & García-Morales, 2008; Delmas & Pekovic, 2018) because excessive industrial operations contribute environmental imbalance (Bansal & Song, 2017). For example, growing environmental concerns, such as increasing global warming, and degradation of the natural resource have called for firms to mitigate their impact on the natural environment. However, researchers have expressed concern about the difficulty of realizing environmental improvements if the current approaches to environmental issues are not changed (Newton & Harte, 1997). An interesting strand of the sustainability literature suggests that a growing number of firms integrating proactive environmental strategy (PES) into their overall business strategy (Arago'n-Correa, 1998; Aragón-Correa et al., 2008; Stefan & Paul, 2008).

To motivate more PES among firms, however, it is crucial to understand why and how some firms take a more proactive environmental stance than others. Indeed, organization and strategy researchers have paid growing attention to explain the factors that influence a firm's pursuit of PES. For example, several efforts have been directed to explaining the influence of firm environmental strategy on their performance (Danso, Adomako, Amankwah-Amoah, Owusu-Agyei, & Konadu, 2019; Roxas, Ashill, & Chadee, 2017; Stefan & Paul, 2008). The concensus is that firms that embark on proactive environmental practices perform better than their counterparts that do not integrate environmental solutions into their overall business strategy (Adomako, Amankwah-Amoah, Danso, Konadu, & Owusu-Agyei, 2019).

Despite the burgeoning attention of the performance outcomes of PES, there is a fundamental question: If PES contributes to firm performance, under what condition does this happen? We consider this question legitimate because previous studies have failed to explain how BOP orientation and imitation impact PES–firm performance relationship. Moreover, answering this question is timely

because prolonged investment in environmental sustainability in the face of failure would increase the financial costs.

To address this gap, this paper draws on natural resource-based view (NRBV) (Chan, 2005; Hart, 1995) to examine the moderating impacts of BOP and imitation orientations on the PES-performance relationship. The NRBV suggests that firms should integrate environmental issues into their strategic planning process (Hart, 1995; Shrivastava, 1995). This perspective suggests that the incorporation of environmental issues into the decision-making process of the firm is likely to help the firm deal with uncertainties surrounding business operations and environmental issues. This could help build stronger competitive capabilities for the firm (Banerjee, 2001; Hart, 1995).

To test our model, we survey with 266 small- and medium-sized enterprises (SMEs) in Ghana, a growing developing country. In doing so, this paper makes important contributions to the literature. First, the papers extend the sustainability literature (Adomako et al., 2019; Delmas & Pekovic, 2018; Rennings & Zwick, 2002; Roxas, Ashill, & Chadee, 2017) by showing the impact of PES on firm performance more pronounced in firms that do not embark use the bottom of the pyramid (BOP) orientation. The BOP market represents the biggest market for firms in developing countries (Kantar Research Report, 2015; Prahalad & Hammond, 2002), and this market segment remains underserved. Therefore, explaining when PES positively drives performance in the BOP market is crucial for extending the sustainability literature. Second, imitation strategy plays a significant role in a firm's strategic direction in developing economies (Wu, Harrigan, Ang, & Wu, 2019). However, the moderating role of this strategic orientation on the relationship between PES and performance has not been examined. Given that imitation orientation is critical for enhancing legitimacy (DiMaggio & Powell, 1983; Fligstein, 1985), addressing its moderating impact on the PES–performance relationship expands our knowledge in the sustainability literature. Third, the paper adds to the limited literature on the performance of SMEs. In contrast to much of the existing body of research on PES (Dou, Su, & Wang, 2019), this paper utilizes data from a developing economy (Ghana) to examine how two strategic orientations mostly utilized by firms in developing countries moderate the PES–performance relationship. A major contribution here is the testing of our research model in a developing economy (Hoskisson, Eden, Lau, & Wright, 2000). This is particularly important in light of the growing interests in environmental concerns in developing countries in general and Africa in particular. Moreover, the rapid rise of many developing countries as part of the global production networks suggests that the shift of production from advanced economies to less developed country contexts is likely to continue. This situation raises concerns about poor environmental standards in many developing economies. Thus, a greater insight of how BOP and imitation orientations moderate the impact of PES on firm performance should inform the design of public policy in developing countries.

The rest of the paper is organized as follows. First, the theoretical background and the derived hypotheses are presented. Next, the sample and data collection procedure are described. The analyses and results of the study are presented. This study concludes with the discussion of findings as well as the theoretical and practical implications of the study.

2 | THEORETICAL BACKGROUND AND HYPOTHESES

With the increasing notion that PES significantly alleviates the negative impact of human activities on the environment, researchers have devoted a substantial effort to understand the performance outcomes of PES (Danso et al., 2019; Roxas et al., 2017; Stefan & Paul, 2008). Given that environmental strategy provides environmental protection initiatives to help firms in their strategic plaining (Chan, 2010; Yang, Jiang, & Zhao, 2019), the question as to whether adopting PES yields competitive advantage or not has been explored in the literature (Marcus & Fremeth, 2009; Palmer, Oates, & Portney, 1995). Previous studies tend to show that PES adds costs and reduces firm performance in the short term (Cordeiro & Sarkis, 1997; Palmer et al., 1995). Conversely, other studies have found that adopting PES helps improve differentiation which in turn spurs firm performance (Danso et al., 2019; Leonidou, Katsikeas, & Morgan, 2013; Marcus & Fremeth, 2009). The competitive advantage derived from environmental strategy is critical for superior performance because it allows firms to continuously upgrade their existing capabilities and incorporate new ones, thereby responding to changing environments (Danneels, 2008).

The resource-based view (RBV) of the firm (Barney, 1991; Wernerfelt, 1984) suggests that the competitive advantage of a firm is a function of the strategic resources that the firm possesses. The key foundation of the RBV is that a firm's resources that are considered valuable, rare, inimitable, and nonsubstitutable have the potency to generate a competitive advantage for the firm (Barney, 1991; Grant, 1991). Although the RBV is important for explaining how resources and capabilities generate a competitive advantage for the firm, the NRBV (Hart, 1995) has emerged as a recent extension of the RBV. The NRBV emphasizes the need for firms to develop their competitive advantage by addressing the challenges posed by the natural or biophysical environment. According to Hart (1995), firms can develop their competitive advantage by being environmentally proactive. The NRBV further suggests that it is vitally important to develop strategic capabilities to address environmental challenges. Based on this view, firms that develop capabilities to reduce their impact on the environment can increase their competitive performance (Hart, 1995). However, the performance outcomes of environmental strategy remain contentious (Roxas et al., 2017). For example, the cost of implementing PES could add significantly to the operating cost of the firms. On the other hand, strategic capabilities derived from implementing PES could add to a stronger competitive advantage because they are valuable, rare, and nonsubstitutable, which act as sources of differentiation for the firm (Chan, 2005). The mixed notions related to the performance outcomes of PES are consistent with the view that the benefits of

greater PES may depend on some contingency factors. Thus, this paper focus on BOP and imitation orientations as contingency variables on the PES–performance relationship.

2.1 | The role of BOP orientation

One of the key objectives of this study was to examine the moderating effects of BOP orientation on the PES–performance relationship. BOP orientation has been conceptualized as a firm's capability that provides direction for developing products and the firm's strategic orientation towards the bottom of the base market (Zhu, Wei, Bao, & Zou, 2019). The BOP market in developing countries is characterized by illiteracy, and poverty remains the norm for some four billion people in the BOP market (Kolk, Rivera-Santos, & Rufín, 2014; London & Hart, 2004; Prahalad & Hammond, 2002). When the firm takes a proactive stance in managing environmental activities that reduce pollution, both the firm and consumers with deprived income benefits from the knowledge flows and knowledge sharing stemming from environmental management help firms establish strong reputation and image thereby enhancing customer orientation to achieve competitive advantages (Ateş, Bloemhof, van Raaij, & Wynstra, 2012). The notion of value creation where economic, social, and environmental sustainability are linked to the concept of inclusive development tends to integrate the poor as consumers (Gold, Chowdhury, Huq, & Heinemann, 2020; Hahn, 2012).

However, BOP consumers are deprived of literacy and are inexperienced in consumption (Nakata & Weidner, 2012; Prahalad, 2006). This is a major challenge for firms operating in this market. For example, individuals who lack resources and consumption experience may not recognize the benefits of sustainable environmental practices. These characteristics are associated with costs and risks (Zhu et al., 2019). For example, firms operating in this market may incur costs of educating BOP consumers to create awareness of sustainable consumption. This is particularly so as firms embarking on PES need to use their scarce resources to understand the needs of the BOP consumers. Accordingly, firms may only succeed when they can overcome the costs and risks associated with the challenges in serving this market. Moreover, the price-sensitive nature of BOP consumers constraints firms' ability to make a profit (Simanis, 2012; Zhu et al., 2019). Thus, the foregoing argument leads us to suggest that when firms pursue greater BOP orientation, the benefits accrued from PES is fewer. Accordingly, this paper argues that

Hypothesis 1. The impact of PES on firm performance will be stronger among firms that do not pursue the BOP orientation than firms that pursue BOP orientation.

2.2 | The role of imitation orientation

This paper sought to clarify the impact of imitation orientation on the relationship between PES and firm performance. Imitation orientation is defined as the firm's culture and strategic direction to mimic competitors' strategic actions and marketing activities (Luo, Sun, & Wang, 2011; Shenkar, 2010). As such, a firm's imitation orientation is similar to late movers that follow or mimic pioneers to introduce products to the market. Instructively, imitation can be explained in two ways. First, firms tend to mimic their competitors to stay competitive and obtain legitimacy (DiMaggio & Powell, 1983). It has also been argued that firms copy their rivals to defend their current market position (Lieberman & Asaba, 2006). Second, firms imitate others when they believe that those firms offer superior products or services (Lieberman & Asaba, 2006). Thus, firms that imitate other organizations' products and services can perform and behave in a manner that is isomorphic to other firms (Oliver, 1991).

Based on Hart's (1995) view on strategic environmental capabilities, this paper highlights the importance of PES such as pollution prevention, product stewardship, and sustainable innovation for firms pursuing imitation to leverage these capabilities to increase their competitive performance. Indeed, the design and adoption of environmentally sustainable business practices (Tetrault Sirsly & Lamertz, 2008) can impact negatively on the firm's financial objectives by adding significant costs to the business' operating costs. However, given that imitation orientation is considered a specific capability (Lee & Zhou, 2012), this paper argues that the relationship between PES and firm performance is positive for firms pursuing imitation orientation but nonsignificant for firms that do not pursue imitation orientation for the following reasons. First, firms pursuing imitation orientation stand a better chance to enhance their performance because the cost of imitation is much lower than innovation. This is because firms adopting imitation orientation could offset the costs of PES to enhance their performance as imitators do not need to spend many resources on research (Schnaars, 1994). Second, firms pursuing imitation orientation can convert PES into improved performance because PES provides imitators with the opportunity to identify a superior position and introduce sustainable products to better serve customers (Yang et al., 2019). Thus, this paper suggests that

Hypothesis 2. The impact of PES on firm performance will be stronger among firms that pursue imitation orientation than firms that do not pursue imitation orientation.

3 | METHOD

3.1 | Sample and data collection

The data used in this paper were collected from chief executive officers and finance managers of SMEs operating in Ghana. The sampling frame for the study was derived from theGhana Business Directory. The database contained 7,200 SMEs. Our sample met the following criteria: (a) independent entities with no affiliation to any group of companies and (2) businesses employing a maximum of 250 full-time employees.

The data were collected in two phases. In the first phase (T1), we approached 800 firms using face-to-face interview approach to capture PES, BOP orientation, imitation orientation constructs, and the control variables. The first survey yielded 311 responses. After cases with missing values were removed, our final sample for Time 1 consisted of 306 firms. The services of a research firm with skilled field researchers were used to administer the questionnaires. One of the authors of the paper, with extensive experience in data collection in sub-Saharan Africa, supervised the data collection process.

Subsequently, finance managers of the 306 firms were approached with a questionnaire in person to elicit information about firm performance. The second survey took place because a cross-sectional survey is mostly associated with common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We excluded 40 firms because they could not identify their finance managers. Hence, 266 complete responses were used for the final analyses, which represented a 33.25% overall response rate. The use of multiple sources of information across two different time points is crucial because using single-source information is often associated with common method bias (Chang, van Witteloostuijn, & Eden, 2010; Podsakoff et al., 2003). The average firm size was 85 employees and the average firm age was 12 years.

3.2 | Measure of constructs

All measures were derived from previously validated scales and were captured on a 7-point Likert-type scale with anchors ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

3.2.1 | Proactive environmental strategy

Five items from Sharma and Vredenburg (1998) were used to capture PES. Chief executive officers were asked to indicate how their firms have performed in terms of environmental practices over the past 3 years.

3.2.2 | BOP orientation

Six items from Zhu et al. (2019) were used to measure BOP orientation. The respondents were asked to respond that reflect their firms' capability to understand the needs of their BOP consumers and the ability to come out with products and marketing programs that satisfy those needs.

3.2.3 | Imitation orientation

A firm's imitation orientation allows the focal firm to learn from industry leaders, and this allows the firm to reduce the cost of production and environmental uncertainty related to innovation and profit outcomes (Rivkin, 2001; Wu et al., 2019). Following Lee and Tang (2018) and Shenkar (2010), we conceptualized imitation orientation as the extent to which a firm tends to copy product ideas and products of its pioneers or competitors. Accordingly, we used four items from Lee and Tang (2018) to capture a firm's ability to mimic products of its pioneers or competitors.

3.2.4 | Firm performance

Six subjective performance measures from Spanos and Lioukas (2001) were used to measure performance. The use of subjective performance measures has been found to have a powerful motivational influence on the managerial choice (Dess & Robinson, 1984; Powell, 1992). Finance managers were asked to compare their ventures with industry rivals in the last 3 years. Responses were received on a 7-point Likert scale with anchors 1 (*much worse than competitors*) and 7 (*much better than competitors*). A composite score of the six items constituted the variable score for firm performance. Using perceptual performance measures is advantageous over objective indicators because managers' perception of performance or failure has critical managerial implications (Dess & Robinson, 1984).

3.2.5 | Control variables

Several control variables were used to account for their influence on the research model. These are firm size, firm age, environmental munificence, gender, and education. Firm size was assessed as the number of full-time employees and firm age was captured as the number of years the firm had been in operation since inception. We measured environmental munificence with two items taken from Jaworski and Kohli (1993). Gender was controlled for as a dummy variable (0 = male; 1 = female). Finally, *education* was controlled for ("1" = *high school*, "2" = *higher national diploma*, "3" = *bachelor's degree*, "4" = *master's degree*, and "5" = *doctoral degree*).

3.3 | Measure validation and reliability assessment

Exploratory factor analysis and confirmatory factor analysis procedures were employed to assess the validity of the constructs used in the study. Exploratory factor analysis results indicate that all the items loaded on their respective factors, yielding 5 factors with eigenvalues larger than 1. These factors accounted for about 79.22% of the total variance. No cross-loadings were obtained, and all loadings were greater than. 40. With confirmatory factor analysis, excellent fit to the data was obtained (χ^2/df = 2.49, root mean square error of approximation [RMSEA]= .06, comparative fit index [CFI] = .97, nonnormed fit index= .98, normed fit index [NFI] = .98). Besides, composite reliability and average variance extracted tests for the convergent validity and discriminant validity of the constructs were employed, and results provided support for both convergent and discriminant validity.

Nonresponse bias was investigated by following the procedures suggested in previous studies (Armstrong & Overton, 1977; Rogelberg & Stanton, 2007). The early and late respondents were compared in terms of firm age, firm size, gender, and education by employing Pearson's chi-square test for discreet variables (Greenwood & Nikulin, 1996). The results indicate that early and late respondents do not differ in terms of these firm-level or individual-level characteristics. Hence, nonresponse bias does not appear to be a concern in this study.

To account for a potential common method bias, additional tests were undertaken. First, the Lindell and Whitney's (2001) procedure was used to examine whether common method bias influenced the integrity of the results by identifying an item that is not conceptually related to any of our constructs (marker variable). The item "Our customers require a perfect fit between their needs and our offerings" was used as a marker variable. This item measures customer demandingness. Results from Lindell and Whitney's (2001) test show low and nonsignificant correlations (ρ = −.01 to.04), suggesting that our data are free from common method variance. Second, following Podsakoff, MacKenzie, and Podsakoff (2012), a single common latent factor in the models was included. Results show that the path coefficients of the main model did not change significantly when the idle factor was integrated (noncommon method factor model: χ^2/df = 2.69, p < .001, NFI = .98, CFI = .98, RMSEA = .05; common method factor model: χ^2/df = 2.33, p < .001, NFI = .95, CFI = .97, RMSEA = .06). Also, the items were found to load significantly on their respective constructs (Table 1).

4 | RESULTS

4.1 | Key findings

Table 2 presents the means, standard deviations, and correlations among the variables. Before testing the hypotheses, we performed several checks to assess whether any assumptions have been violated. First, equality of variance, independence of the error term, and the normality of the residual were assessed. Second, the variance inflation factors (VIFs) were inspected and found that the largest VIF was 3.96, which was below the suggested threshold value of 10 (Neter, Wasserman, & Kutner, 1990). Table 3 provides standardized hierarchical regression. Model 1 contains the control variables. Model 2 added the moderating variable. The results in Model 2 indicate that both BOP and imitation orientations significantly influence firm performance (p <.01 for BOP orientation and p <.05 for imitation orientation). Although we did not hypothesize the effect of PES on firm performance, in Model 3, PES was significantly and positively related to firm performance (p <.01). The result in Model 3 is consistent with previous studies (Amankwah-Amoah, Danso, & Adomako, 2019; Lartey et al., 2020).

The moderating hypotheses were examined by creating two interaction terms. Next, the subgroup analysis approach was used to test the hypotheses (Acquaah, 2007; Aulakh, Kotabe, & Teegin, 2000). In Table 3, Models 4a and 4b test the moderating effect of BOP orientation whereas Models 5a and 5b examine the moderating role of imitation orientation. The results show that the beta coefficient for the impact of PES on firm performance was significant and positive for non-BOP firms (β = .49, p <.01) but not significant for BOP firms (β = .05; *ns*). A t test analysis shows that the coefficients are significantly different (t = 2.42, p <.05). This provides no support for Hypothesis 1. Model 5 tests the effect of PES on firm performance between imitation-oriented firms and nonimitation-oriented firms. The results indicate that the beta coefficient for PES on firm performance for imitation-oriented firm was positive and significant (β = .38, p <.01) but nonsignificant for firms that do not practice imitation orientation (β = .02; *ns*). A t test assessment shows that the coefficients are significantly different (t = 1.93, p <.05). Therefore, Hypothesis 2 is supported.

4.2 | Robustness assessment

To substantial the robustness of the research findings, additional analyses were performed. First, employment growth was used as an alternative measure of firm performance. Accordingly, respondents reported at two different times the number of employees (when the firm was established and currently). Employment growth was measured by using a relative measure (i.e., $[t2 - t1] \div t1$) (Davidsson & Wiklund, 2000). The results remain substantially the same: non-BOP firms (β = .35, p <.01) and BOP firms (β = .05; *ns*). Concerning the moderating role of imitation, we find support for Hypothesis 2: imitation-oriented firms (β = .32, p <.01) and nonimitation-oriented firms (β = .02; *ns*). Second, an alternative model was tested by adding additional control variables including financial slack, stakeholder pressure, and environmental dynamism. Substantially, the results were in line with our initial findings. This indicates that the results presented in this paper are robust to alternative explanations (Stam, 2010). Third, the analysis was extended beyond the usually examined mean centering where VIF values are used as proxies for detecting multicollinearity by including all the two interaction terms concurrently in the regression equation. The results are in the direction of hypothesized specifications. Prior research suggests that when interaction terms with common variables are concurrently included in a model, they can conceal the detection of the true moderating variables as a result of multicollinearity (De Clercq, Dimov, & Belausteguigoitia, 2016; Zahra & Hayton, 2008). However, the interaction terms in the main model and interaction term models show consistency. This provides support for the robustness of our regression models.

5 | DISCUSSION AND CONCLUSION

In the past two decades, environmental issues have received considerable attention in the popular business press and related publications concerning the negative impact of human activities on the

TABLE 1 Details of measures and results of validity tests

Constructs and indicators	Factor loadings (*t* values)
Proactive environmental strategy (Sharma & Vredenburg, 1998)	
In the past 3 years	
Our company has reduced wastes and emissions from operations	.93 (1.00)
Our company has company undertaken actions to reduce the environmental impact of its products	.88 (21.09)
Our company has undertaken actions to reduce the risk of environmental accidents, spills, and releases	.90 (23.38)
Our company has established partnerships to reduce environmental impact	.92 (25.14)
Our company has undertaken actions to reduce the environmental impact	.89 (22.15)
BOP orientation (Zhu, Wei, Bao, & Zou, 2019)	
In the past 3 years	
Our firm has endeavored to explore market opportunities in the BOP market such as develop new products and formulate business strategies to serve this market	.87 (1.00)
Our firm has invested in uncovering the BOP consumer characteristics	.86 (17.20)
Our firm has thoroughly considered the needs of BOP consumers in serving this segment	.87 (18.37)
Our firm has thoroughly considered BOP consumer product usage context in serving this segment	.82 (14.38)
Our firm has thoroughly considered BOP consumer affordability in serving this segment	.73 (12.65)
Our firm has thoroughly considered BOP consumer's education level to understand product-related information in serving this segment	.80 (13.93)
Product imitation (Lee & Tang, 2018)	
We frequently follow the strategic moves of our major competitors	.95 (1.00)
We prefer to enter the market after our competitors	.92 (23.56)
We emphasize the value of mimicking competitors	.90 (21.74)
We consider ourselves a challenger rather than an innovator	.91 (22.60)
Environmental munificence (Jaworski & Kohli, 1993)	
Demand for industry products or services is declining (r)	.86 (1.00)
Products become obsolete quickly in target markets (r)	.94 (24.29)
Firm performance (Spanos & Lioukas, 2001)	
Growth in sales volume	.92 (1.00)
Sales volume	.82 (14.95)
Return on sales	.78 (11.59)
Growth in market share	.88 (16.70)
Growth in profitability	.87 (15.63)
Growth in productivity	.88 (16.71)

Abbreviation: r, reverse coded.

environment (Dou et al., 2019). As such, pressures on firms to adopt sustainable environmental practices have intensified. This has resulted in the integration of nonfinancial goals related to environmental issues into the decision-making behavior of firms. Accordingly, researchers have devoted a substantial amount of effort to explain the performance benefits of integrating environmental issues into the firm's decision-making behavior (Danso et al., 2019; Hart & Ahuja, 1996; Roxas et al., 2017). The outcome of these studies is that firms that embark on proactive environmental practices stand to perform better than those that do not pursue sustainability-related practices. However, how strategic orientations such as BOP and imitation moderate the relationship between PES and performance lacks theoretical precision. Thus, this study draws from the NRVB (Chan, 2005; Hart, 1995) to explore two conditions under which PES effectively drive firm performance. The findings from the study show that (1) the relationship between PES and firm performance is positive for non-BOP oriented firms but not significant for firms that are BOP oriented; (2) the effect of PES on firm performance is not significant for nonimitation-oriented firms but significant for firms that imitate products. Thus, the findings support our hypotheses. These findings contribute to the literature in three specific ways.

First, the finding that the effect of PES on firm performance is more pronounced in non-BOP firm departs from previous research that focused on linear relationships between PES and performance (Amankwah-Amoah et al., 2019). By showing that non-BOP firms can convert PES into greater performance, this paper extends the

TABLE 2 Descriptive statistics and correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
Firm size (employees)	84.93	21.23								
Firm age	12.49	7.26	−.08							
Gender	.52	.44	−.10	−.11						
CEO education	1.98	0.83	.00	.01	.04					
Environmental munificence	4.38	1.24	−.11	−.08	.15*	.07				
Imitation orientation	5.29	1.08	−.09	−.10	−.08	.09	−.11			
BOP orientation	4.46	1.44	−.13*	−.14*	−.04	−06	−.13*	.33**		
Proactive environmental strategy (PES)	5.40	1.03	.23**	.19**	−.13*	.22**	.19**	−.16*	−.10	
Firm performance	5.15	1.69	−.12	−.10	.06	.12	.14*	.13*	.20**	.21**

Note: Gender = female = 0; male = 1.
*$p < .05$.
**$p < .01$.

TABLE 3 Regression results for effect of PES on firm performance and sub-group analysis of the moderating effects

Variables	Dependent variable: firm performance (*N* = 266)						
Control variables	Model 1	Model 2	Model 3	Model 4a BOP oriented firms (*N* = 109)	Model 4b Non-BOP oriented (*N* = 157)	Model 5a Imitation-oriented firms (*N* = 158)	Model 5b Nonimitation-oriented firms (*N* = 108)
Firm size	−.11*	−.11*	−.10*	−.09*	−.04	−.06	.07*
Firm age	−.08*	−.08*	−.09*	−.08*	−.05	−.06	−.09*
Gender	.05	0.06	.06	.07*	.04	.05	.07*
CEO education	.06	.05	.06	.11*	.09*	.13**	−.12*
Environmental munificence	.13**	.13**	.13**	.14**	.12*	.10*	.05
BOP orientation		.19***	.20***				
Imitation orientation		.14**	.14**				
PES			.23***	.05	.49***	.38***	.02
Model fit statistics							
Model *F*	2.41	5.29***	7.04***	2.10	17.06***	15.63***,***	3.20*
R^2	.12	.15	.22	.25	.29	.31	.36

*$p < .10$.
**$p < .05$.
***$p < .01$.

current literature that focuses on the influence of sustainability-related practices and firm performance (Adomako et al., 2019; Roxas et al., 2017).

Second, this paper contributes to previous BOP studies (Hall, Matos, Sheehan, & Silvestre, 2012; London & Hart, 2004; Prahalad & Hammond, 2002) by integrating the natural environment literature and BOP literature. In doing so, this paper extends the current understanding of environmental strategies and the role BOP orientation play in facilitating these strategies to yield greater performance.

Third, the finding that PES positively relates to firm performance in imitation-oriented firms but nonsignificant for nonimitation-oriented firms extends our understanding of how imitation orientation moderates PES-performance relationship. Beyond environmental factors that may influence the PES-performance linkage, this paper shows that imitation orientation is crucial for leveraging PES activities to deliver superior performance. The finding extends our understanding of the role that imitation plays in facilitating the relationship between PES and firm performance. Thus, Hypotheses 1 and 2 advance our understanding of the boundary conditions of the effect of PES. Fourth, because our sample comes from firms in a developing country, our results contribute to the sustainability literature by showing that PES is beneficial not only to large firms but also to firms operating in a developing market context. Indeed, existing knowledge of the roles of PES in firms from developing countries is quite limited.

This paper reveals that the effect of PES on firm performance is greater when a firm uses non-BOP and nonimitation strategies.

The findings have some practical implications for SME managers in developing countries. The findings that the effect of PES on firm performance is significant for non-BOP and imitation-oriented firms are relevant for SME managers to understand the impact of strategic orientations on PES–performance relationship. Based on these findings, it has been recommended that managers of non-BOP and imitation firms operating in developing countries pursue PES activities as this is likely to enhance their performance. Thus, we recommend SME managers to consider employing environmental strategy when they are not pursuing BOP. However, SMEs should consider pursuing PES when they adopt imitation orientation. This is because BOP customers may not value the importance of sustainability-oriented practices. However, imitation orientation could provide product development costs for firms pursuing PES, which is crucial for enhancing firm performance.

6 | LIMITATIONS AND FUTURE RESEARCH

Despite the unique insights provided by our study, many limitations and questions need to be addressed in future research. First, although we adopted a time-lagged design by collecting data in two phases to better assess the causal impact of PES on firm performance, we do not know to what extent this is affected by CEOs' performance aspiration. By collecting information on performance aspiration, risk propensity, and other related variables, future research could provide a deeper understanding of the dynamics between PES and performance. Second, this study was conducted in the empirical context of manufacturing ventures in Ghana, so the findings must be evaluated in the context of a developing economy. Although Ghana shares many characteristics with other emerging economies and thus offers a rich context in which to test the impact of entrepreneurial behavior theories from a developing economy perspective, other developing countries may possess some unique and varied contextual elements that may reveal additional insights for theory development and practice. Third, self-reported and perceptual measures are used for firm performance. This has the potential to introduce respondent bias into the sample. Therefore, future research may make use of secondary sources of financial information. Fourth, this paper focused on SMEs as these firms are mostly found in the context of developing economies. However, because larger firms are more resourceful, they can spend more on environmental activities to achieve environmental legitimacy to improve their performance. As such, future studies should examine the influence of BOP and imitation orientation on the relationship between PES and performance in larger firms. Finally, due to the cross-sectional nature of our data, this paper cannot ascertain the causal direction of the relationships observed. Although the direction of the hypotheses was guided by theory, we suspect that firm performance could increase environmental proactivity. Although we performed a robust test to confirm the direction of causality, to better understand the causal nature of these relationships, we encourage researchers interested in this line of inquiry to test our conceptual model with longitudinal data.

Despite the foregoing limitations, the results reported in this research show that the effect of PES on firm performance is more pronounced for firms adopting the non-BOP orientation and imitation orientation. Overall, the outcomes from this study extend the strategy and natural environment literature in several ways. In the main, the study contributes to theory development by providing a clearer illustration of the specific conditions in which PES impact on firm performance within a developing country context.

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